

531469

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

15 APR 2005

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
21 May 2004 (21.05.2004)

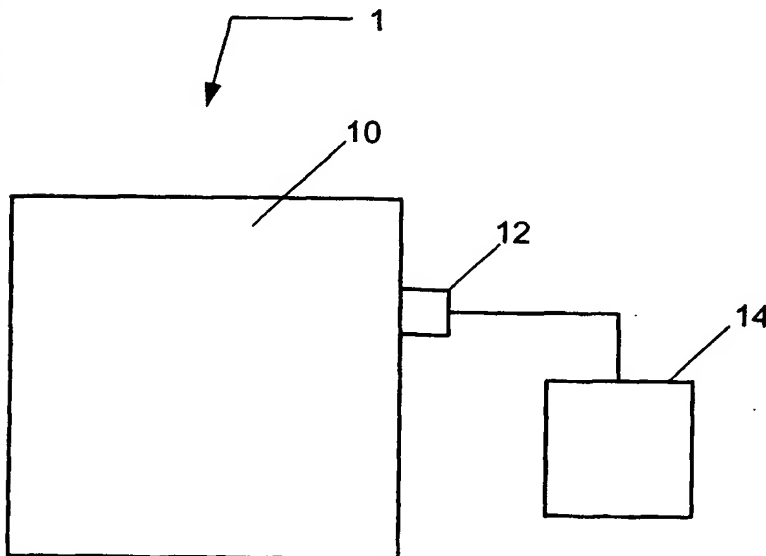
PCT

(10) International Publication Number
WO 2004/042788 A2

- (51) International Patent Classification⁷: **H01L**
- (21) International Application Number:
PCT/US2003/031528
- (22) International Filing Date: 31 October 2003 (31.10.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/422,511 31 October 2002 (31.10.2002) US
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- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR DETERMINING AN ETCH PROPERTY USING AN ENDPOINT SIGNAL



(57) **Abstract:** The present invention presents a plasma processing system for etching a layer on a substrate comprising a process chamber, a diagnostic system coupled to the process chamber and configured to measure at least one endpoint signal, and a controller coupled to the diagnostic system and configured to determine in-situ at least one of an etch rate and an etch rate uniformity of the etching from the endpoint signal. Furthermore, an in-situ method of determining an etch property for etching a layer on a substrate in a plasma processing system is presented comprising the steps: providing a thickness of the layer; etching the layer on the substrate; measuring at least one endpoint signal using a diagnostic system coupled to the plasma processing system, wherein the endpoint signal comprises an endpoint transition; and determining the etch rate from a ratio of the thickness to a

difference between a time during the endpoint transition and a starting time of the etching.

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